OVERVIEW

Founded in 1974, the University of Delaware's Center for Composite Materials (UD-CCM) is an internationally recognized leader in composites science and engineering education, research and industrial collaboration. With annual expenditures of $7.5 million, a multidisciplinary team (seven departments across three UD colleges) of 45 affiliated faculty, 25 research professionals, 17 post doctoral fellows, 18 visiting scholars, and over 60 graduate and undergraduate research assistants along with a 14-member administrative team collaborate on more than 100 current projects.

UD-CCM is host to three Department of Defense Centers of Excellence and has become a State of Delaware resource for bridge infrastructure and a national resource for composites processing. UD-CCM's University Industry Consortium, with 32 member companies, is a collaborative network leveraging UD-CCM's laboratory facilities, technological expertise and ongoing research. More than 180 companies have transitioned basic and applied research to the State and the nation.

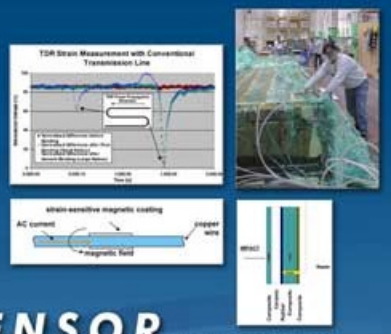
CCM CURRENTLY HOST TO THREE MAJOR BLOCK GRANTS

2001: ONR Advanced Materials Intelligent Processing Center (AMIPC) — PROCESSING

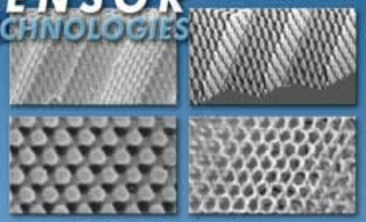
2001: ARL Materials Center of Excellence Program *Microstructural Design of Materials* — MATERIALS

2000: ARL Composite Materials Technology (CMT) Program: *Composite Materials Technology for Transformation of the Army* — MECHANICS

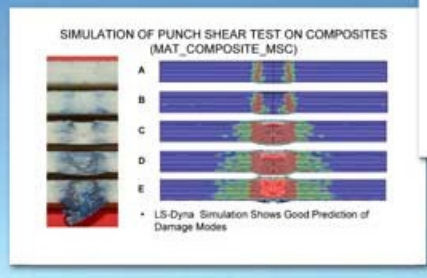
Coordinated program plans offer significant leveraging and benefits between services and technologies for transition into DoD applications

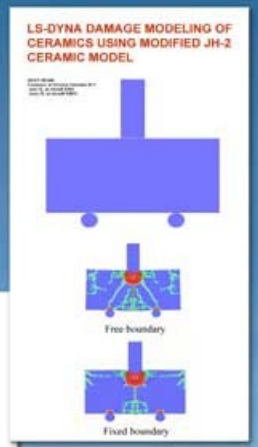


SENSOR TECHNOLOGIES



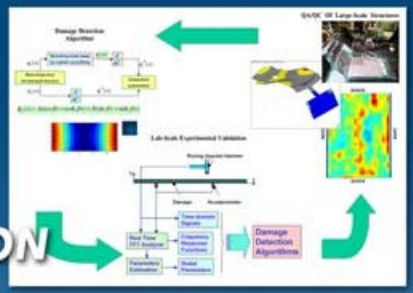
3D photonics-based sensors

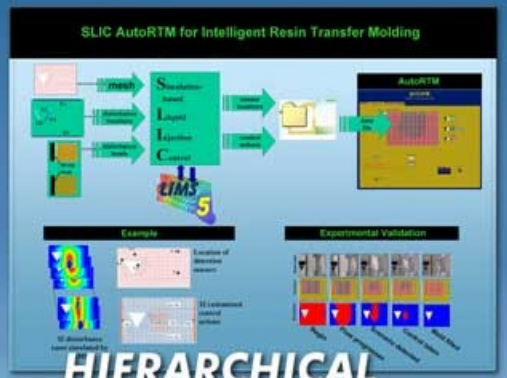




PHYSICS OF FAILURE MECHANISMS

SIGNATURE DECONVOLUTION ALGORITHMS





HIERARCHICAL REASONERS

UD-CCM serves as a technology incubator for new businesses, access to world-class facilities and technology transfer experts. Seven beta sites for intelligent processing using UD-CCM's VARTM technology have been established throughout the United States. Currently more than nine small businesses are commercializing UD-CCM developed technologies through Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) award funding.

OUR CAPABILITIES

- Advanced Sensor Technologies
- Signature Deconvolution Algorithms for Detecting and Localizing Damage
- Hierarchical Reasoners Integrated with Sensor Data
- System Integration - Sensors, Actuators, Materials and Processing

WHAT WE'RE LOOKING FOR

R&D and Technology Transition Partnerships

UNIVERSITY OF DELAWARE
CENTER FOR COMPOSITE MATERIALS